

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	474	(546/345).CCLS.	US-PGPUB; USPAT	OR	OFF	2008/01/07 02:09
L2	85	1 and dichloropyridine	US-PGPUB; USPAT	OR	OFF	2008/01/07 02:10

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	("s(shapiroadjrafeal.inv.")).PN.	US-PGPUB	OR	OFF	2008/01/07 00:58
L2	0	("sshapiroadjrafeal.inv.")).PN.	US-PGPUB	OR	OFF	2008/01/07 00:58
L3	755753	s shapiro adj rafeal.inv.	US-PGPUB	OR	OFF	2008/01/07 00:58
L5	0	(shapiro adj rafeal.inv.)	US-PGPUB	OR	OFF	2008/01/07 01:00

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	("s(shapiroadjrafeal.inv.")).PN.	US-PGPUB	OR	OFF	2008/01/07 00:58
L2	0	("sshapiroadjrafeal.inv.")).PN.	US-PGPUB	OR	OFF	2008/01/07 00:58
L3	755753	s shapiro adj rafeal.inv.	US-PGPUB	OR	OFF	2008/01/07 00:58
L5	0	(shapiro adj rafeal.inv.)	US-PGPUB	OR	OFF	2008/01/07 01:00

L3 ANSWER 6 OF 9 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 140:93833 CASREACT

TITLE: An Efficient Two-Step Total Synthesis of the Quaterpyridine Nemertelline

AUTHOR(S): Bouillon, Alexandre; Voisin, Anne Sophie; Robic, Audrey; Lancelot, Jean-Charles; Collot, Valerie; Rault, Sylvain

CORPORATE SOURCE: UFR des Sciences Pharmaceutiques, Centre d'Etudes et de Recherche sur le Medicament de Normandie, Caen, 14032, Fr.

SOURCE: Journal of Organic Chemistry (2003), 68(26), 10178-10180

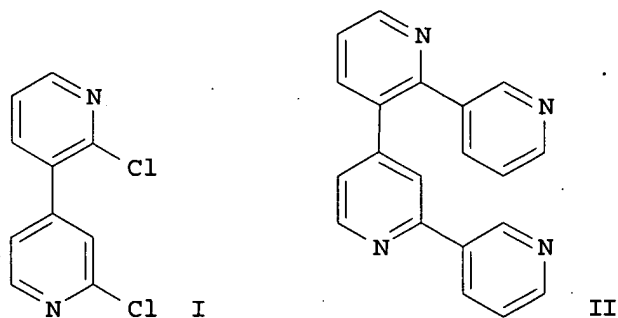
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

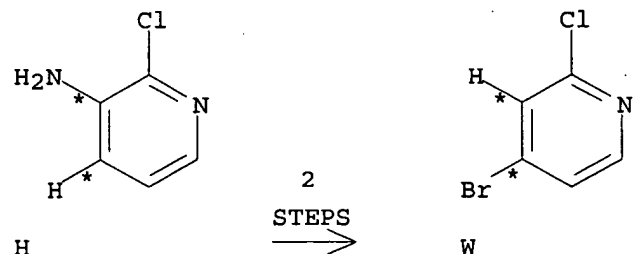
GI



AB Regioselective and univocal Suzuki cross-coupling reactions performed on halopyridinyl boronic acids provide a flexible and versatile route to a multigram scale synthesis of 2,2'-dichloro-3,4'-bipyridine (I), which allows couplings with excess pyridin-3-yl boronic acid to give a new and efficient two-step rapid synthesis of nemertelline (II), the quaterpyridine neurotoxin isolated from a Hoplonemertine sea worm.

RX(13) OF 44 COMPOSED OF RX(4), RX(6)

RX(13) H ==> W



RX(4) RCT H 6298-19-7

Updated Search

RGT O 10035-10-6 HBr, K 7632-00-0 NaNO<sub>2</sub>, P  
7787-70-4 CuBr  
PRO N 52200-48-3  
SOL 7732-18-5 Water

RX(6) RCT N 52200-48-3

STAGE(1)

RGT X 4111-54-0 LiN(Pr-i)<sub>2</sub>  
CAT 7726-95-6 Br<sub>2</sub>  
CON -78 - -50 deg C

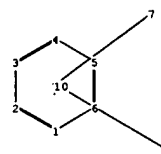
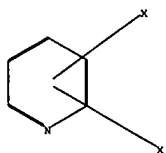
STAGE(2)

RGT J 7647-01-0 HCl  
SOL 7732-18-5 Water

PRO W 73583-37-6  
NTE regioselective

REFERENCE COUNT: 30

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



chain nodes :

7 8

ring nodes :

1 2 3 4 5 6

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

normalized bonds :

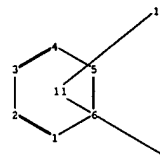
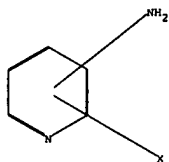
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:Atom 10:Atom



chain nodes :

7 10

ring nodes :

1 2 3 4 5 6

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

normalized bonds :

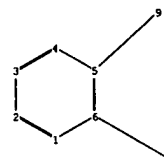
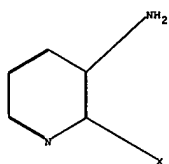
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 10:CLASS 11:CLASS



chain nodes :

7 9

ring nodes :

1 2 3 4 5 6

chain bonds :

5-9 6-7

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

5-9

exact bonds :

6-7

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS



Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal612bxr

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAPLUS enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAPLUS enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAPLUS enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAPLUS coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAPLUS enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/CAPLUS enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS	29	JAN 02	STN pricing information for 2008 now available
NEWS EXPRESS	19	SEPTEMBER 2007:	CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS LOGIN			Welcome Banner and News Items

Updated Search

NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 00:42:23 ON 07 JAN 2008

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 00:42:34 ON 07 JAN 2008

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STRUCTURE FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4

DICTIONARY FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> e nemertelline/cn

E1 1 NEMECITE (FEH(SIO4).3H2O)/CN

E2 1 NEMEROSIN/CN

E3 1 --> NEMERTELLINE/CN

E4 1 NEMESIS/CN

E5 1 NEMESTRAN/CN

E6 1 NEMETZON/CN

E7 1 NEMETZONE/CN

E8 1 NEMEX/CN

E9 1 NEMEXIN/CN

E10 1 NEMICIDE/CN

E11 1 NEMIFITIDE/CN

E12 1 NEMIFITIDE DITRIFLUTATE/CN

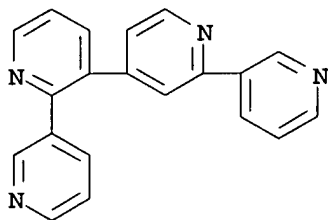
=> s e3

L1 1 NEMERTELLINE/CN

Updated Search

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 59697-14-2 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 3,2':3',4':2'',3'''-Quaterpyridine (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Nemertelline  
MF C20 H14 N4  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS,  
NAPRALERT, RTECS\*, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)



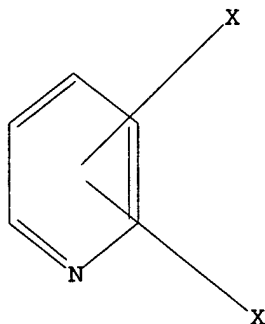
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

8 REFERENCES IN FILE CA (1907 TO DATE)  
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=>  
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\bngb.str

L2 STRUCTURE UPLOADED

=> d 12  
L2 HAS NO ANSWERS  
L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 12  
SAMPLE SEARCH INITIATED 00:44:35 FILE 'REGISTRY'

Updated Search

SAMPLE SCREEN SEARCH COMPLETED - 34790 TO ITERATE

5.7% PROCESSED 2000 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 684651 TO 706949  
PROJECTED ANSWERS: 42375 TO 48079

L3 50 SEA SSS SAM L2

=> s l2 full  
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 177.90 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
FULL SEARCH INITIATED 00:44:40 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 696987 TO ITERATE

100.0% PROCESSED 696987 ITERATIONS 40509 ANSWERS  
SEARCH TIME: 00.00.03

L4 40509 SEA SSS FUL L2

=> file hcaplus  
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	186.89	187.10

FILE 'HCAPLUS' ENTERED AT 00:44:45 ON 07 JAN 2008  
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FILE COVERS 1907 - 7 Jan 2008 VOL 148 ISS 2  
FILE LAST UPDATED: 6 Jan 2008 (20080106/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l4/prep  
26351 L4  
4509774 PREP/RL  
L5 6848 L4/PREP  
(L4 (L) PREP/RL)

=> file reg  
COST IN U.S. DOLLARS

	SINCE FILE	TOTAL
--	------------	-------

Updated Search

	ENTRY	SESSION
FULL ESTIMATED COST	2.69	189.79

FILE 'REGISTRY' ENTERED AT 00:44:58 ON 07 JAN 2008  
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STRUCTURE FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4  
DICTIONARY FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>  
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\anfjv.str

L6 STRUCTURE UPLOADED

=> s 16  
SAMPLE SEARCH INITIATED 00:45:53 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 158952 TO ITERATE

1.3% PROCESSED	2000 ITERATIONS	8 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)		
SEARCH TIME: 00.00.01		

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 3155529 TO 3202551  
PROJECTED ANSWERS: 11204 TO 14228

L7 8 SEA SSS SAM L6

=>  
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\bvm.str

L8 STRUCTURE UPLOADED

=> s 18  
SAMPLE SEARCH INITIATED 00:46:43 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 695 TO ITERATE

100.0% PROCESSED	695 ITERATIONS	21 ANSWERS
SEARCH TIME: 00.00.01		

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

Updated Search

BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 12319 TO 15481  
PROJECTED ANSWERS: 146 TO 694

L9 21 SEA SSS SAM L8

=> s l8 full  
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 177.90 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
FULL SEARCH INITIATED 00:46:48 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 14566 TO ITERATE

100.0% PROCESSED 14566 ITERATIONS 420 ANSWERS  
SEARCH TIME: 00.00.01

L10 420 SEA SSS FUL L8

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	179.28	369.07

FILE 'HCAPLUS' ENTERED AT 00:46:51 ON 07 JAN 2008  
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FILE LAST UPDATED: 6 Jan 2008 (20080106/ED)

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=> s l10/rct  
900 L10  
3051239 RCT/RL  
L11 746 L10/RCT  
(L10 (L) RCT/RL)

=> d his

(FILE 'HOME' ENTERED AT 00:42:23 ON 07 JAN 2008)

FILE 'REGISTRY' ENTERED AT 00:42:34 ON 07 JAN 2008  
E NEMERTELLINE/CN

L1 1 S E3  
L2 STRUCTURE UPLOADED  
L3 50 S L2

Updated Search



=> file hcaplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.46	372.22

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 00:47:25 ON 07 JAN 2008  
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FILE LAST UPDATED: 6 Jan 2008 (20080106/ED)

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=> s e3

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L14 18239 L13

=> file reg  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
2.69	383.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 00:47:36 ON 07 JAN 2008  
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STRUCTURE FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4  
DICTIONARY FILE UPDATES: 4 JAN 2008 HIGHEST RN 960040-46-4

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Updated Search



TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d ihs

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:n

=> d his

(FILE 'HOME' ENTERED AT 00:42:23 ON 07 JAN 2008)

FILE 'REGISTRY' ENTERED AT 00:42:34 ON 07 JAN 2008

E NEMERTELLINE/CN

L1 1 S E3

L2 STRUCTURE UPLOADED

L3 50 S L2

L4 40509 S L2 FULL

FILE 'HCAPLUS' ENTERED AT 00:44:45 ON 07 JAN 2008

L5 6848 S L4/PREP

FILE 'REGISTRY' ENTERED AT 00:44:58 ON 07 JAN 2008

L6 STRUCTURE UPLOADED

L7 8 S L6

L8 STRUCTURE UPLOADED

L9 21 S L8

L10 420 S L8 FULL

FILE 'HCAPLUS' ENTERED AT 00:46:51 ON 07 JAN 2008

L11 746 S L10/RCT

L12 260 S L11 AND L5

FILE 'REGISTRY' ENTERED AT 00:47:10 ON 07 JAN 2008

E NITRITE/CN

FILE 'HCAPLUS' ENTERED AT 00:47:25 ON 07 JAN 2008

S E3

FILE 'REGISTRY' ENTERED AT 00:47:28 ON 07 JAN 2008

L13 1 S E3/CN

FILE 'HCAPLUS' ENTERED AT 00:47:28 ON 07 JAN 2008

L14 18239 S L13

FILE 'REGISTRY' ENTERED AT 00:47:36 ON 07 JAN 2008

=> e nitrite/cn

E1 1 NITRINE-TDC/CN

E2 1 NITRINOSE/CN

E3 1 --> NITRITE/CN

E4 1 NITRITE (13NO21-)/CN

E5 1 NITRITE (15N18O21-)/CN

Updated Search

```

E6          1      NITRITE (15NO1801-)/CN
E7          1      NITRITE (15NO21-)/CN
E8          1      NITRITE (CYTOCHROME C;AMMONIA-FORMING) REDUCTASE/CN
E9          1      NITRITE (CYTOCHROME) REDUCTASE/CN
E10         1      NITRITE (H(NO2)21-)/CN
E11         1      NITRITE (NO1801-)/CN
E12         1      NITRITE (NO2-)/CN

```

=> s e3

```
L15          1 NITRITE/CN
```

=> s l15

```
L16          1 NITRITE/CN
```

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.76	393.97

FILE 'HCAPLUS' ENTERED AT 00:47:53 ON 07 JAN 2008  
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FILE COVERS 1907 - 7 Jan 2008 VOL 148 ISS 2  
 FILE LAST UPDATED: 6 Jan 2008 (20080106/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l16

```
L17          18239 L16
```

=> d his

(FILE 'HOME' ENTERED AT 00:42:23 ON 07 JAN 2008)

FILE 'REGISTRY' ENTERED AT 00:42:34 ON 07 JAN 2008

E NEMERTELLINE/CN

```

L1          1 S E3
L2          STRUCTURE UPLOADED
L3          50 S L2
L4          40509 S L2 FULL

```

FILE 'HCAPLUS' ENTERED AT 00:44:45 ON 07 JAN 2008

```
L5          6848 S L4/PREP
```

FILE 'REGISTRY' ENTERED AT 00:44:58 ON 07 JAN 2008

Updated Search

L6               STRUCTURE UPLOADED  
 L7               8 S L6  
 L8               STRUCTURE UPLOADED  
 L9               21 S L8  
 L10              420 S L8 FULL  
  
 FILE 'HCAPLUS' ENTERED AT 00:46:51 ON 07 JAN 2008  
 L11              746 S L10/RCT  
 L12              260 S L11 AND L5  
  
 FILE 'REGISTRY' ENTERED AT 00:47:10 ON 07 JAN 2008  
                  E NITRITE/CN  
  
 FILE 'HCAPLUS' ENTERED AT 00:47:25 ON 07 JAN 2008  
                  S E3  
  
 FILE 'REGISTRY' ENTERED AT 00:47:28 ON 07 JAN 2008  
 L13              1 S E3/CN  
  
 FILE 'HCAPLUS' ENTERED AT 00:47:28 ON 07 JAN 2008  
 L14              18239 S L13  
  
 FILE 'REGISTRY' ENTERED AT 00:47:36 ON 07 JAN 2008  
                  E NITRITE/CN  
 L15              1 S E3  
 L16              1 S L15  
  
 FILE 'HCAPLUS' ENTERED AT 00:47:53 ON 07 JAN 2008  
 L17              18239 S L16

=> d his

(FILE 'HOME' ENTERED AT 00:42:23 ON 07 JAN 2008)  
  
 FILE 'REGISTRY' ENTERED AT 00:42:34 ON 07 JAN 2008  
                  E NEMERTELLINE/CN  
 L1               1 S E3  
 L2               STRUCTURE UPLOADED  
 L3               50 S L2  
 L4               40509 S L2 FULL  
  
 FILE 'HCAPLUS' ENTERED AT 00:44:45 ON 07 JAN 2008  
 L5               6848 S L4/PREP  
  
 FILE 'REGISTRY' ENTERED AT 00:44:58 ON 07 JAN 2008  
 L6               STRUCTURE UPLOADED  
 L7               8 S L6  
 L8               STRUCTURE UPLOADED  
 L9               21 S L8  
 L10              420 S L8 FULL  
  
 FILE 'HCAPLUS' ENTERED AT 00:46:51 ON 07 JAN 2008  
 L11              746 S L10/RCT  
 L12              260 S L11 AND L5  
  
 FILE 'REGISTRY' ENTERED AT 00:47:10 ON 07 JAN 2008  
                  E NITRITE/CN  
  
 FILE 'HCAPLUS' ENTERED AT 00:47:25 ON 07 JAN 2008  
                  S E3

Updated Search

FILE 'REGISTRY' ENTERED AT 00:47:28 ON 07 JAN 2008  
L13 1 S E3/CN

FILE 'HCAPLUS' ENTERED AT 00:47:28 ON 07 JAN 2008  
L14 18239 S L13

FILE 'REGISTRY' ENTERED AT 00:47:36 ON 07 JAN 2008  
E NITRITE/CN  
L15 1 S E3  
L16 1 S L15

FILE 'HCAPLUS' ENTERED AT 00:47:53 ON 07 JAN 2008  
L17 18239 S L16

=> s l17 and l12  
L18 0 L17 AND L12

=> s l12 and l17'  
MISMATCHED QUOTE 'L17''  
Quotation marks (or apostrophes) must be used in pairs,  
one before and one after the expression you are setting  
off or masking.

=> s l12 and l17  
L19 0 L12 AND L17

=> s l12 and copper  
968463 COPPER  
474 COPPERS  
968534 COPPER  
(COPPER OR COPPERS)  
L20 8 L12 AND COPPER

=> s l20 and nitrite  
63708 NITRITE  
26074 NITRITES  
79792 NITRITE  
(NITRITE OR NITRITES)  
L21 1 L20 AND NITRITE

=> d l21, ibib abs hitstr, 1

L21 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2005:696875 HCAPLUS  
DOCUMENT NUMBER: 143:155307  
TITLE: Process for the manufacture of 2,3-dichloropyridine  
INVENTOR(S): Shapiro, Rafael  
PATENT ASSIGNEE(S): E.I. Dupont de Nemours and Company, USA  
SOURCE: PCT Int. Appl., 23 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070888	A2	20050804	WO 2005-US2462	20050121
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,				

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

AU 2005206576	A1	20050804	AU 2005-206576	20050121
CA 2553850	A1	20050804	CA 2005-2553850	20050121
EP 1706381	A2	20061004	EP 2005-712075	20050121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS, YU				
CN 1910152	A	20070207	CN 2005-80002691	20050121
BR 2005006502	A	20070227	BR 2005-6502	20050121
JP 2007523065	T	20070816	JP 2006-551437	20050121
US 2007161797	A1	20070712	US 2006-583635	20060620
IN 2006DN03640	A	20070824	IN 2006-DN3640	20060623
MX 2006PA08208	A	20060831	MX 2006-PA8208	20060719
PRIORITY APPLN. INFO.:			US 2004-539068P	P 20040123
			WO 2005-US2462	W 20050121

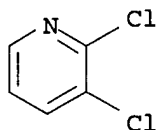
OTHER SOURCE(S): CASREACT 143:155307

AB A method for preparing 2,3-dichloropyridine is disclosed in which  
 3-amino-2-chloropyridine is contacted with an alkali metal nitrite  
 in the presence of aqueous hydrochloric acid to form a diazonium salt; and the  
 diazonium salt is subsequently decomposed in the presence of copper  
 catalyst wherein at least about 50% of the copper is the  
 copper(II) oxidation state.

IT 2402-77-9P, 2,3-Dichloropyridine  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (process for the manufacture of 2,3-dichloropyridine)

RN 2402-77-9 HCAPLUS

CN Pyridine, 2,3-dichloro- (CA INDEX NAME)

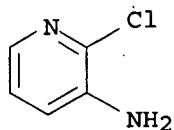


IT 94770-75-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (process for the manufacture of 2,3-dichloropyridine)

RN 94770-75-9 HCAPLUS

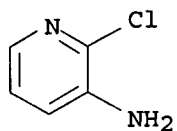
CN 3-Pyridinamine, 2-chloro-, monohydrochloride (9CI) (CA INDEX NAME)

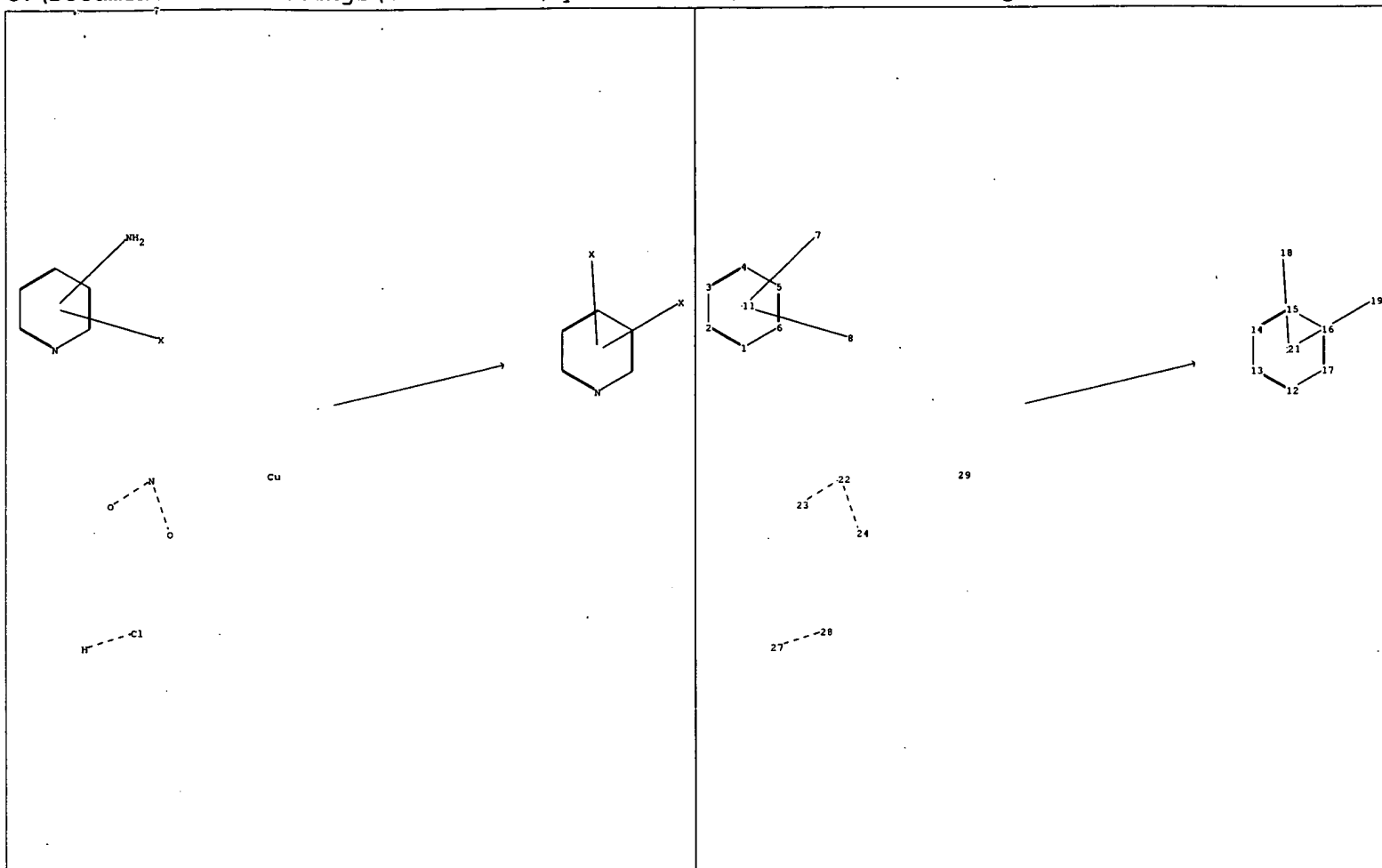


● HCl

Updated Search

IT 6298-19-7, 3-Amino-2-chloropyridine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(process for the manufacture of 2,3-dichloropyridine)  
RN 6298-19-7 HCAPLUS  
CN 3-Pyridinamine, 2-chloro- (CA INDEX NAME)





chain nodes :

7 8 18 19 22 23 24 27 28 29

ring nodes :

1 2 3 4 5 6 12 13 14 15 16 17

chain bonds :

22-23 22-24 27-28

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 12-13 12-17 13-14 14-15 15-16 16-17

exact/norm bonds :

22-23 22-24 27-28

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 12-13 12-17 13-14 14-15 15-16 16-17

isolated ring systems :

containing 1 : 12 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:Atom 11:Atom  
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:CLASS 19:CLASS 20:Atom  
21:Atom 22:CLASS 23:CLASS 24:CLASS 27:CLASS 28:CLASS 29:CLASS

fragments assigned reactant role:

containing 1

fragments assigned product role:

containing 12

fragments assigned reactant/reagent role:

containing 22

containing 27

containing 29